

IN THE CLAIMS

Please amend the claims to read as follows:

Listing of Claims

1. (Currently Amended) An electrolyte membrane-electrode assembly comprising a hydrogen ion conductive polymer electrolyte membrane and a pair of electrodes sandwiching the polymer electrolyte membrane therebetween, each said electrode comprising a catalyst layer and a gas diffusion layer attached to said polymer electrolyte membrane, ~~characterized in that~~ wherein:

said gas diffusion layer comprises a fabric having a warp thread and a weft thread which are made of carbon fiber, and

the distance X between adjacent intersections where said warp and weft threads cross each other and the thickness Y of said fabric satisfy the equation: $1.4 \leq X/Y \leq 3.5$.

2. (Original) The electrolyte membrane-electrode assembly in accordance with claim 1, wherein the height A and the width B of said warp thread, and the height C and the width D of said weft thread respectively satisfy $0.2 \leq A/B \leq 0.4$ and $0.1 \leq C/D \leq 0.4$.

3. (Original) The electrolyte membrane-electrode assembly in accordance with claim 1, wherein the height C and the width D of said weft thread disposed vertically to said consecutive warp thread satisfy $0.1 \leq C/D \leq 0.3$.

4. (Original) The electrolyte membrane-electrode assembly in accordance with claim 1, wherein said substrate has a water repellent layer comprising a carbon fine powder and a water repellent resin on the surface of said substrate on said catalyst layer side, and said water repellent layer has a thickness of 1 to 50 μm .

5. (Original) The electrolyte membrane-electrode assembly in accordance with claim 1, wherein said polymer electrolyte membrane has a thickness of 9 to 50 μm .

6. (Original) The electrolyte membrane-electrode assembly in accordance with claim 1, wherein said catalyst layer has a thickness of 1 to 30 μm .

7. (Currently Amended) A polymer electrolyte fuel cell characterized in that said fuel cell comprising:

~~(1)~~ (a) an electrolyte membrane-electrode assembly comprising a hydrogen ion conductive polymer electrolyte membrane and a pair of electrodes sandwiching said polymer electrolyte membrane therebetween, said electrode comprising a catalyst layer attached to the polymer electrolyte membrane and a gas diffusion layer, said gas diffusion layer comprising a fabric comprising a warp thread and a weft thread which are made of carbon fiber, the distance X between adjacent intersections where said warp and weft threads cross each other and the thickness Y of said fabric satisfying the equation: $1.4 \leq X/Y \leq 3.5$; and

~~(2)~~ (b) a pair of conductive separator plates having a gas channel on the face in contact with said gas diffusion layer of said electrolyte membrane-electrode assembly and sandwiching said electrolyte membrane-electrode assembly such that said separator plate is attached to said gas diffusion layer of the electrolyte membrane-electrode assembly, a clamping pressure of 1 to 20 kgf/cm² being applied per the area where each of said electrodes and each of said conductive separator plates are in contact with each other.

8. (Currently Amended) A method for producing an electrolyte membrane-electrode assembly comprising a hydrogen ion conductive polymer electrolyte membrane and a pair of electrodes

comprising a catalyst layer and ~~said a~~ gas diffusion layer
comprising carbon fabric, and sandwiching said hydrogen ion
conductive polymer electrolyte membrane being sandwiched such
that ~~each of~~ said catalyst layer is in contact with the polymer
electrolyte membrane, said method ~~being characterized in that~~
comprising smoothing the rough surface of said carbon fabric of
said gas diffusion layer ~~is smoothed~~ by heating , with flame
radiation, laser radiation, or a radiant heater, the surface of
said gas diffusion layer before disposing said gas diffusion
layer on said polymer electrolyte membrane.